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IN RE: QUENDALL TERMINAL SUPERFUND

PUBLIC MEETING - PROPOSED PLANS

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Taken at  
13056 S.E. 76th Street  
Newcastle, Washington

REPORTED BY: Thad Byrd, CCR  
REPORTED ON: September 24, 2019

1 NEWCASTLE, WASHINGTON; TUESDAY, SEPTEMBER 24, 2019

2 6:27 p.m.

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5 KAY MORRISON: Thank you for coming. Because  
6 this evening's meeting is a formal process, I'm going to  
7 use this script so I don't leave anything out.

8 Before I start, I wanted to acknowledge how much we  
9 appreciate Aegis Gardens for providing this lovely space  
10 and for their generosity in providing coffee and tea to  
11 their visitors here, and especially to Cecilia Yap, who  
12 arranged all of this and helped us with the technology.

13 My name is Kay Morrison. I'm the community  
14 coordinator for the US Environmental Protection Agency,  
15 and I work in the Seattle office. I'll be facilitating  
16 the meeting tonight.

17 The purpose of this hearing is to allow us to hear  
18 your thoughts and your opinions about EPA's proposed plan  
19 to clean up the Quendall Terminals Superfund site.

20 Your testimony, whether spoken here or provided in  
21 writing is very important. Public comment can be used to  
22 inform and improve EPA's decisions.

23 Whether you speak your comments this evening or  
24 provide them to us in writing, all comments are  
25 considered equally.

1           Before I introduce the team, let me explain how this  
2 evening's meeting is organized. In a minute, our project  
3 manager will give a brief presentation on our work at the  
4 Quendall Terminals Superfund site, the site  
5 contamination, how the Superfund process works and EPA's  
6 preferred alternatives for cleanup.

7           The hearing is a formal process. Thad Byrd is a  
8 court reporter and will make a verbatim transcript of  
9 this hearing, including the formal comments.

10          During the hearing we will listen carefully to your  
11 comments while Thad records them. We will not respond or  
12 answer your comments during the hearing. Please forgive  
13 us if this seems rude, but we don't respond to comments  
14 or questions during hearings.

15          If you plan to provide spoken comments during  
16 tonight's hearing and you haven't done so yet, please  
17 sign up on one of the green sign-up sheets on the table  
18 next to the door.

19          We have this room until 8:30, and we want to make  
20 sure that everyone who would like to provide comments can  
21 speak.

22          To ensure that our process is fair and works for  
23 everyone, we may limit the time each person has to  
24 comment. Knowing how many people wish to speak will help  
25 us ensure that everyone who would like to speak has the

1 opportunity to do so.

2 If you'd like to provide comments, but you don't  
3 want to speak tonight or if you have additional comments  
4 after tonight, please provide them in writing.

5 All comments, whether we record them tonight or you  
6 drop them in our comments box or send them to us by mail  
7 or email, all comments are considered equally.

8 The 30-day comment period for the Quendall Terminals  
9 proposed plans ends on October 9. When the comment  
10 period ends, we'll create a document that lists the  
11 comments you provide and includes our responses to your  
12 comments.

13 This document is called the responsiveness summary  
14 and will be on our website in 2020 along with our record  
15 of decision. There are a lot people here, a lot of  
16 people involved in a project like this and not everyone  
17 can be here tonight.

18 Here this evening is Kathy Cerise, the EPA project  
19 manager for the Quendall Terminals Superfund site, who'll  
20 be speaking to you about our proposed cleanup plans.  
21 Susan Moore is our project manager with Jacobs  
22 Consulting, providing technical support to EPA on the  
23 site.

24 Jo Gallagher and Andrea Lindsay have done so much to  
25 plan and publicize tonight's meeting. Ted Yackulic is

1 our attorney sitting back there. Shawn Blocker is one of  
2 the section chiefs in the Region's Superfund and  
3 Emergency Management Division.

4 I mentioned before that we wouldn't respond or  
5 answer questions during the hearing including Kathy's  
6 presentation.

7 If you have questions about the cleanup plans that  
8 you didn't get a chance to ask during the open house,  
9 Kathy will stay after the hearing to talk with you. We  
10 need to be out of this space by 9 o'clock, so please be  
11 aware of that.

12 This is the start of the formal hearing. For the  
13 record, this hearing is convened on Tuesday, September  
14 24th, 2019 in the Stan Head Cultural Center in Newcastle,  
15 Washington. The time is 6:32 p.m. The purpose of this  
16 hearing is to hear your comments on EPA's proposed  
17 Quendall Superfund site.

18 KATHY CERISE: On September 9th, EPA released  
19 a proposed plan for the cleanup of the Quendall Superfund  
20 site. We invited the public to review and comment on the  
21 proposed plans.

22 This presentation is a brief overview of the site  
23 and the preferred cleanup activities that EPA is  
24 proposing. Quendall Terminals is a 51-acre site.

25 We designated two what we call operable units for

1 cleanup. There's Operable Unit 1, which is the upland  
2 soils. That's 23 acres. Operable unit 2, which is  
3 in-water sediment, is 28 acres.

4 The site is currently undeveloped and is bordered to  
5 the north by the Seahawks' training facility and to the  
6 south by housing development.

7 The site has 1,500 feet of Lake Washington  
8 shoreline, which makes it prime property for  
9 redevelopment. There's a Burlington Northern right of  
10 way to the east.

11 The site was used for creosote manufacturing from  
12 1916 to 1969 where coal tar was refined into creosote.  
13 From 1969 to 1977, it was used for above ground tanks for  
14 storage.

15 The contaminants related to the creosote production  
16 are found at depths to 34 feet, but most are within the  
17 top 20 feet. Sources include the railroad loading area  
18 where creosote was loaded onto railcars.

19 Coal tar was offloaded from the railcars and spills  
20 reportedly occurred, the T-Dock area where coal was  
21 offloaded from freighters and spills including 30,000  
22 gallons of coal tar feedstock.

23 The May Creek channel, Quendall Pond and North Sump  
24 area, all were places where waste was discharged, and the  
25 Still House was where coal tar was refined into creosote.

1           The Quendall site contaminants include benzene,  
2    naphthalene, cPAHS, which are carcinogenic polycyclic  
3    aromatic hydrocarbons.

4           They are concentrated in dense nonaqueous phase  
5    liquid which we refer to as DNAPL. DNAPL is an oily  
6    mixture of chemicals that are heavier than water and only  
7    slightly soluble, slowly dissolving contaminants into  
8    groundwater.

9           DNAPL in the uplands has spread into the lake  
10   sediments along the shoreline. As water interacts with  
11   the DNAPL in the soil, chemicals leach into the  
12   groundwater and can move into Lake Washington. DNAPL is  
13   classified by EPA as a principal threat waste, which is  
14   based on its mobility and toxicity.

15          Superfund cleanup process: In 1988 the initial site  
16   work was ordered. In 2006 the site was added to the  
17   Superfund National Priorities List.

18          In 2012 the site investigation was completed. In  
19   2016 there was an evaluation of cleanup alternatives  
20   conducted. In 2017 EPA reevaluated the upland in situ  
21   treatment technologies and added self-sustaining  
22   smoldering combustion.

23          In 2018 the smoldering combustion treatability study  
24   was successfully completed, and in 2019 we issued the  
25   proposed plan.

1           This map depicts the cleanup approaches proposed for  
2 the site. Alternative D and 7A will address upland DNAPL  
3 in OU1 and DNAPL and contaminated sediment in OU2.

4           The primary objective of these alternatives is to  
5 treat the DNAPL that is the source of groundwater  
6 contamination.

7           The three technologies outlined in the proposed  
8 plan, Alternative 7A for the upland contamination,  
9 include smoldering combustion. This is an innovative  
10 technology that destroys the creosote DNAPL underground.

11           In situ solidification is a binding agent similar to  
12 cement which is injected into the ground and mixed with  
13 the contaminated soil using large augers. The ISS  
14 solidifies the contamination and the surrounding soil  
15 into a solid mass.

16           These technologies will be implemented in a phased  
17 approach. Ultimately, there'll be a cap of three feet of  
18 clean fill which will be placed over areas where soil  
19 cleanup goals haven't been met. The soil cap protects  
20 people and animals from coming into contact with any  
21 contaminated soil.

22           The phased approach: The first step will be to  
23 collect baseline groundwater data before treatment. Next  
24 we will complete the smoldering combustion treatment  
25 starting furthest from the lake and moving toward the



1 lake. The operation time for smoldering combustion is  
2 only two years.

3 The third step will be to compare the post-treatment  
4 groundwater data with the baseline data to determine if  
5 significant sources remain in untreated areas. If so, in  
6 situ solidification would be used for this additional  
7 source treatment.

8 Lastly, there'll be placed a soil cap. For Operable  
9 Unit 2, offshore remedy components will include dredging  
10 and offsite disposal. Areas with creosote, coal tar and  
11 sediment will be dredged using either hydraulic or  
12 mechanical measures.

13 The sand cap in areas with upwelling contaminated  
14 groundwater and enhanced natural recovery, which is a  
15 thin layer capping, will be placed in the remaining  
16 contaminated sediment areas to accelerate the rate of  
17 natural recovery.

18 Self-sustained smoldering combustion is an  
19 innovative technology. The combustion has many benefits  
20 over solidification, which is why it was proposed as the  
21 primary treatment for Quendall.

22 It destroys contaminants for the same cost as  
23 solidification. It reduces impacts to the surrounding  
24 neighborhood by minimizing noise and odors since there's  
25 limited need to disturb the ground surface compared to

1     solidification.

2           It minimizes reliance on institutional controls  
3     since most of the toxic contaminants are permanently  
4     destroyed versus immobilization.

5           Where has this technology been used? This  
6     technology has been used to treat DNAPL contamination  
7     over a large industrial Dupont site in New Jersey. The  
8     cleanup was completed in 2019 with an average reduction  
9     in contamination of greater than 97 percent.

10          The technology is planned for full-scale use at a  
11     Navy site where it was successfully piloted in 2016. The  
12     site is similar to Quendall.

13          The contamination reduction averaged 97.6 percent.  
14     The pilot demonstrated treatment both above and below a  
15     clay layer, which is also similar to the Quendall site.

16          Why does EPA believe smoldering combustion will be  
17     effective at Quendall? Successful DNAPL treatment at  
18     similar sites and its seven pilot studies.

19          It permanently treats contamination with innovative  
20     technology with less adverse impacts than solidification.  
21     It is a modular technology which allows early assessment  
22     of successful treatment and has been successfully  
23     demonstrated at the Quendall site.

24          In the summer of 2018, EPA conducted a successful  
25     field pilot study of smoldering combustion at the

1 Quendall site. A single injection point achieved the  
2 radius of influence of seven feet, which is considered  
3 successful and consistent with other successful treatment  
4 of sites. The reduction of contaminants ranged from 73  
5 percent to greater than 99.9 percent.

6 The colored areas of this map show the estimated  
7 extent and thickness of the DNAPL based on past sampling.  
8 This will be refined during remedial design and as part  
9 of the combustion treatment implementation.

10 The circle shows the size of each combustion  
11 treatment sector. The combustion treatment system is  
12 modular, as I just mentioned, so the equipment can be set  
13 up near the center of the sector and can reach the  
14 contaminated areas within that sector. Once the sector  
15 is treated, combustion equipment will be moved to the  
16 next section.

17 The in-water portion of the cleanup, which is  
18 referred to as Operable Unit 2, includes dredging of  
19 DNAPL in the offshore along the T-Dock and near shore  
20 areas. This area will be 6.4 acres.

21 The engineered sand cap will be 5.4 acres and  
22 approximately 18 inches thick to address sediment outside  
23 the DNAPL areas impacted by upwelling contaminated  
24 groundwater.

25 Enhanced natural recovery, which is thin layer

1 capping, will be clean sand placed in remaining  
2 contaminated sediment areas to mix with the surface  
3 sediments and accelerate the rate of natural recovery.  
4 That will be over 17.6 acres.

5 EPA has committed to be a good neighbor. The  
6 preferred alternatives provide the best balance of  
7 protection, effectiveness and overall cost. EPA is  
8 committed to meaningful community engagement and  
9 communication.

10 EPA will take steps to limit impacts to the  
11 community. Potential impacts to residents during cleanup  
12 include light to moderate noise, odors, visual and slight  
13 increase in traffic from work crews.

14 Again, the comment period is from September 9th to  
15 October 9th, and the expected record of decision would be  
16 spring of 2020. Thank you very much.

17 KAY MORRISON: Thank you so much, Kathy.  
18 Again, we will not be answering or responding to your  
19 comments. I have six names signed up. Is anyone else  
20 going to sign up for comments?

21 When I read your name, please stand up, come to the  
22 microphone, say your name and spell it for the court  
23 reporter and then state your comment. When you're done  
24 speaking, I'll read the next speaker's name. Mr. Cugini.

25 ROBERT CUGINI: I'm Robert Cugini,

1 C-U-G-I-N-I. Thank you for the opportunity to provide  
2 comments on the proposed plan for the Quendall Superfund  
3 site.

4 My family has lived and worked in this area for over  
5 a century and continues to have strong connections and  
6 property ownership in the Kenndale neighborhood.

7 I am here to speak against the proposed plan for the  
8 cleanup of Quendall Terminals, and I encourage EPA to  
9 reconsider its choice of the preferred alternative.

10 My family-owned company, Alteo Properties, is one of  
11 the owners of the Quendall Terminal property. I live in  
12 this neighborhood.

13 We are not some distant potential responsible party  
14 with big pockets who caused the contamination and are  
15 reluctant to work on the cleanup.

16 We are prepared to utilize the proceeds of the sale  
17 of the property to pay our fair share of the cleanup, but  
18 that will never happen with this proposed plan.

19 My family purchased this property in 1971. No one  
20 wants to see this property cleaned up more than I. We  
21 didn't cause this contamination, but we recognize our  
22 responsibility in working with EPA to see that it gets  
23 cleaned up.

24 We've worked with the Washington Department of  
25 Ecology for more than 20 years to investigate the

1 property and identify remedial alternatives. When that  
2 process was all but complete, the EPA decided to list the  
3 site on the National Priorities List.

4 The site was transferred to EPA control, and we have  
5 invested more than 15 million dollars in environmental  
6 studies and government agency oversight to get us to this  
7 point where the cleanup can actually go forward, but this  
8 won't happen if EPA proceeds with its proposed plan,  
9 Alternative 7A.

10 It is disappointing that EPA has rejected other  
11 alternatives which are just as protective by its own  
12 acknowledgment and could actually get implemented.  
13 There's no reason to select this alternative.

14 Groundwater is not a pathway to contamination to  
15 human health, and none of your options, even the chosen  
16 one will ever restore it for human use.

17 Even if it could happen, local city regulations  
18 won't allow for the use of groundwater, so let me be  
19 clear. Even the most aggressive remedy in the list, one  
20 that is not even proposed for this site, will not achieve  
21 groundwater remediation.

22 EPA is basically eliminating the possibility of this  
23 property to be developed in any realistic timeframe. All  
24 the public benefits and access, habitat restoration will  
25 be lost due to the unconscionable tab you hope to pin on

1 potential responsible parties with this proposed remedy.

2 I do appreciate that EPA has divided the site into  
3 two operable units, but even with that the science  
4 experiment of STAR treatment for the upland unit leaves  
5 so much doubt and uncertainty that there is no way for us  
6 to market this property and therefore provide funds for  
7 the cleanup.

8 One potential owner has already pulled out of  
9 negotiations on this property due to EPA's unwillingness  
10 to recognize what it takes to actually make a brown field  
11 opportunity of this magnitude a reality.

12 Instead of working towards a cleanup that works for  
13 the environment and the community, EPA is jeopardizing  
14 the cleanup of one of the last large parcels on Lake  
15 Washington with its public benefit of waterfront access,  
16 habitat restoration and ensuring that the property will  
17 remain contaminated and behind a barbed wire fence  
18 forever.

19 Region 10 management has referred to us as some of  
20 their favorite PRPs with which to work. We have done  
21 everything that you have asked.

22 Our technical consultants, legal team and others  
23 have gone to every meeting, taken every sample, written  
24 every document, and I have traveled to EPA headquarters  
25 several times to be transparent and cooperative with your

1 headquarter leadership.

2 After all of this cooperation and stepping up to our  
3 responsibilities, EPA has made a decision that can't be  
4 supported by the science and is punitive to my community.  
5 The environment, the city of Renton, my neighbors and  
6 friends deserve better than this.

7 We deserve an alternative that can be implemented,  
8 paid for in part by the sale of the property and  
9 constructed in the next few years. Please reconsider  
10 your decision to impose the proposed alternative on this  
11 site. Thank you.

12 **Ex. 6 Personal Privacy (PP)**: Good afternoon. My name is  
13 **Ex. 6 Personal Privacy (PP)** I live at **Ex. 6 Personal Privacy (PP)** in lower  
14 Kenndale. I consider myself a concerned citizen.

15 My day job, and I say this to add some credibility  
16 to my comments, is **Ex. 6 Personal Privacy (PP)** practicing architect.  
17 I'm a fellow in the American Institute of Architects.

18 My practice has extended from Anchorage to San Diego  
19 and include many brown fields, gray fields and  
20 contaminated sites. During all of that I've also been a  
21 14 year member of the Renton Planning Commission back in  
22 the '90s when we first wrote our GMA.

23 I've been monitoring this particular project, this  
24 site since 1977, 42 years, and I heard tonight that that  
25 might even be longer than the EPA, waiting, waiting,



1 waiting.

2 I think there's been an immense amount of work,  
3 including that done by my EPA. I just don't think we're  
4 getting to the solution.

5 Let me be clear. I think we all want this site to  
6 be cleaned up, and we all want it redeveloped.  
7 Unfortunately, the proposed preferred alternative for the  
8 cleanup of Quendall Terminals will not achieve this  
9 shared goal.

10 Your preferred alternative is estimated to take five  
11 and possibly nine years at a cost of approximately 106  
12 million dollars, and that's the least costly alternative  
13 as I read the scenarios.

14 My objection to your recommendation is two fold.  
15 One, I'm starting to realize that I might not live long  
16 enough to see the final cleanup. Two, the estimated cost  
17 of the cleanup is egregiously impractical and will never  
18 happen.

19 By simply dividing the estimated sum of 106 million  
20 into the net developable area, that which you can  
21 actually work with, which is approximately 18 and a half  
22 acres, one can quickly see that the cleanup cost is 5.7  
23 million dollars per acre or \$130 per square foot. We  
24 have nothing in our region that comes to those kinds of  
25 per square costs.

1 Further, your recommendation includes using the  
2 still experimental solution of smoldering combustion. I  
3 know one might claim that this STAR technology is proven,  
4 but there remains so much caution in its use that even  
5 the plan in its current form recommends 100 years of  
6 monitoring. I find that disconcerting.

7 No matter who's expected to pay this cost, whether  
8 it be the property owners, the past owners, some grant  
9 fund, the original polluters or we the taxpayers working  
10 with the EPA, this solution must be cost effective.  
11 Otherwise, it will never be implemented.

12 If the plan is adopted, the likelihood of this site  
13 getting cleaned up and redeveloped is yet again dead. We  
14 all need an implementation solution. Thank you.

15 Ex. 6 Personal Privacy (PP) My name is Ex. 6 Personal Privacy (PP)  
16 I appreciate the comments that have been made, but I was  
17 looking at more specifics about this STAR system.

18 I would like to know -- on the diagram it shows a  
19 vacuum device, which is supposedly pulling out the gases  
20 and odors and things like that.

21 I'd like to know how effective that actually is,  
22 whether the gases that come up and the byproducts of the  
23 burning will actually be completely captured, and if so,  
24 where do they go?

25 I'd also like to know if there is a power failure,

1 assuming this is an electrically-operated system, what  
2 happens then? The ignition or the burning does not stop  
3 if there's a power failure, so I'd like to know that, and  
4 so those two things I would like to get some clarity on.

5 Finally, when you talk about odors, what does that  
6 mean? How terrible would that be to be nearby and be  
7 subjected to the end result of the charcoal type burning?  
8 Thank you very much.

9 **Ex. 6 Personal Privacy (PP)** Hi, there, **Ex. 6 Personal Privacy (PP)**  
10 **Ex. 6 Personal Privacy (PP)** As some of you may  
11 know, I'm a home builder.

12 I built the community called Barby Mill on an  
13 arsenic contaminated site adjacent, and I am opposed to  
14 the current cleanup preferred alternative plan because I  
15 don't think it's practical and it's too expensive.

16 I've dealt with a couple different sites where we  
17 had contaminant, one with gasoline in Seattle that was  
18 cleaned up prior to our purchase at the cost of millions  
19 of dollars.

20 Then after we purchased it, we spent millions of  
21 dollars hauling that same material back out that had been  
22 filled in. It makes no sense to clean this up without a  
23 development being done at the same time.

24 That's the way we developed the Barby Mill community  
25 into 113 homes, but if I had it to do all over again with

1     what I was run through with DOE and EPA at the last  
2     minute before we were delivering homes, I wouldn't do it  
3     again.

4             There was a lot of moving of the goal post at the  
5     last minute that prevented people from moving into their  
6     homes on time, et cetera.

7             I don't understand why there's no baseline data yet  
8     and why that's the start of this process after 20 to 30  
9     years in the process.

10            I don't know what the risk of contamination levels  
11     are, and I'm not an expert in that, but I do know that  
12     once a site is developed -- we do need more housing in  
13     the area. We've got an affordable housing problem here,  
14     and every time we do something like this it exacerbates  
15     that.

16            I do know that once streets are in, buildings are  
17     built, that people aren't going to come in contact with  
18     the earth there.

19            There may be an issue with what's out there in the  
20     lake, but I do also know that the background level for  
21     arsenic contamination was higher than the level that we  
22     were supposed to clean the site up to.

23            It was 26 parts per billion, and the cleanup level  
24     was designated at 13 parts per billion. That's naturally  
25     occurring, so I don't believe that some of the standards

1 are appropriate.

2 I would like to know what the percentage of the area  
3 to be covered with impervious surfaces is and if that has  
4 been taken into account.

5 It makes more sense for me to cap the site and do  
6 other remediation that can be done. Robert and his  
7 family's worked on this for year, and they have a plan  
8 for that.

9 The Virginia site, what was it going to be used for  
10 after the cleanup? If this is to be a public park, I  
11 think it's a different standard where people can come in  
12 contact with the earth, et cetera.

13 What's the natural rate of the DNAPL decomposition?  
14 Has that been looked at? Is there a reason to remove  
15 that DNAPL that's down underneath the site once it's been  
16 capped and it can't migrate?

17 As I said before, we need housing. I would prefer  
18 that the plan that Robert's worked so hard on and I think  
19 is workable be implemented so I can see it in my lifetime  
20 and enjoy the use of it.

21 TIM FLYNN: Good evening. My name is Tim  
22 Flynn, F-L-Y-N-N. I'm a principal hydrogeologist with a  
23 firm called Aspect Consulting.

24 I've been in this industry for a little over 30  
25 years, involved in the study and cleanup of contaminated

1 sites in the Northwest. I know the Quendall site quite  
2 well. I've served for the past 15 years as the lead  
3 consultant during completion of what's called the  
4 remedial investigation study and the feasibility study  
5 looking at remedial alternatives.

6 I am here to provide oral comments obviously on  
7 behalf, though, of the Quendall Terminal Ownership Group,  
8 and as has been said multiple times clearly by Robert  
9 Cugini, my client definitely wants to see the site  
10 cleaned up and provide it for redevelopment, but we do  
11 not support EPA's proposed remedy, which is Alternative  
12 7A in the proposed plan.

13 Tonight I just want to touch upon four key areas of  
14 technical concern, and then we're going to follow up with  
15 more detailed written comments.

16 First, EPA's proposed remedy includes active  
17 treatment of all DNAPL materials. By the way, Kathy did  
18 a nice job of defining DNAPL and principal threat waste,  
19 so I'm going to use those terms, hopefully not confusing  
20 anyone. They're essentially the terms that Kathy defined  
21 in discussing the site.

22 As I mentioned, EPA's proposed remedy includes  
23 active treatment of all DNAPL materials in the site in  
24 the uplands and offshore.

25 That's irrespective of the risk to human health and

1 the environment it poses, which we believe is not  
2 consistent with the National Contingency Plan nor is it  
3 consistent with EPA's application of its own principal  
4 threat waste policy applied to other Superfund sites  
5 essentially containing creosote or DNAPL.

6 There are other cleanup alternatives as Robert had  
7 mentioned that were considered in the feasibility study  
8 that are equally protective and can be implemented more  
9 quickly and with greater certainty and at significantly  
10 lower cost, and I'll come back to that.

11 We base this concern on several points. First,  
12 classification of all creosote or DNAPL impacted soil  
13 sediment as principal threat waste was done regardless of  
14 the quantity, mobility or location and is not considered  
15 the actual risk posed by the site contaminants.

16 There were some questions raised about the nature of  
17 the DNAPL. It's very old, some of which is quite  
18 immobile. It is very weathered and is not apt to be  
19 mobile.

20 Targeting complete groundwater restoration in our  
21 view is not realistic, nor technically feasible even  
22 under any alternative considered in the feasibility  
23 study, nor is it necessary given current projected future  
24 restrictions on groundwater use at the site.

25 None of the alternatives, even the most aggressive

1 alternative evaluated in the feasibility study, achieve  
2 groundwater restoration within a reasonable timeframe.  
3 Consequently, there is no technical basis presented in  
4 the proposed plan for eliminating Alternatives 2 through  
5 6 -- these are alternatives from the feasibility study --  
6 from any further consideration in developing this  
7 preferred remedy.

8 The assertion is those Alternatives 2 through 6 were  
9 eliminated based on the assumption that more aggressive  
10 alternatives would achieve groundwater restoration, and  
11 we disagree with that assertion.

12 Second, the effectiveness of smoldering combustion  
13 or self-sustaining treatment for active remediation,  
14 STAR, is highly uncertain given the site conditions.

15 When I say site conditions, probably the most  
16 telling issue or particular issue at this site is that  
17 the DNAPL is present in very thin disbursed layers of  
18 material over a large area of the site. It is not sort  
19 of well-behaved or concentrated in any one area.

20 Including STAR in the proposed plan greatly  
21 increases that uncertainty in terms of the ability of  
22 that technology to target and effectively combust all of  
23 these thin layers of DNAPL over a 19- to 23-acre site  
24 resulting in high cost and very long construction  
25 duration.



1           Our basis for that is the technology has not been  
2   field tested at this scale. There is a site plan in  
3   Virginia as Kathy mentioned. It's certainly beginning to  
4   be used at sites, but I think its application and  
5   effectiveness is very much site specific.

6           There's no site at this point proven to meet EPA's  
7   objectives of complete principal threat waste treatment  
8   or groundwater restoration to the cleanup standards that  
9   are specified in the proposed plan.

10          In fact, EPA's pilot study indicated severe  
11   limitations in its ability to fully treat principal  
12   threat waste at Quendall, so we disagree with the  
13   conclusion that it is quite effective at this site.

14          There is no technical basis for the assumption that  
15   60 percent of the DNAPL at the Quendall Terminal site can  
16   be effectively treated using STAR. That's the assumption  
17   used for cost estimating purposes and is a significant  
18   portion of the DNAPL at the site.

19          As I mentioned previously, the majority of the DNAPL  
20   is present in thin layers. Just to give you a sense of  
21   this, over 40 percent of the DNAPL occurs in layers that  
22   are less than one foot in thickness, and approximately 76  
23   percent of the DNAPL occurs in two foot thickness or  
24   less. These are very thin layers.

25          Consequently, the actual duration of work is

1 expected to be significantly higher than the estimate  
2 provided by EPA due to the challenges of treating such  
3 thin discontinuous layers.

4 The schedule of approximately six years in our view  
5 is unrealistic. Based on the pilot study, we anticipate  
6 more like eight to nine years to implement STAR.

7 That is not accounting for the fact that if STAR is  
8 ineffective at treating DNAPL, EPA may choose to come  
9 back in and use solidification in those same areas, so  
10 that just adds more to the timeframe.

11 EPA's comparative cost estimate for STAR versus  
12 solidification are not in our view representative of  
13 applicable contractor costs.

14 The STAR cost estimate is low and based on very  
15 optimistic implementation assumptions that do not account  
16 for the potential need of coming back in with  
17 solidification in areas that STAR is ineffective, whereas  
18 the solidification costs we believe are high.

19 Odor control is important, and there are techniques  
20 in any remediation to control odor, but there is going to  
21 be some odor.

22 What you want to do is limit the time of field  
23 implementation of a remedy. That is your most effective  
24 means to reduce the impacts to the community.

25 No. 3, the proposed remedy is not consistent with

1 the Superfund Task Force recommendations which aims to  
2 support site redevelopment. EPA in recent years has come  
3 out under the new administration with a task force to try  
4 to focus Superfund to implement more readily sites to  
5 redevelopment. That's what I referred to as the task  
6 force.

7 Active treatment of all DNAPL is not warranted given  
8 low risk of much of the DNAPL at Quendall Terminals.  
9 Just to illustrate, of the 43 EPA sites involving  
10 creosote -- this is throughout the United States -- only  
11 five of the 43 had designations of all DNAPL as principal  
12 threat waste. The others do not.

13 In all cases the remedies were less aggressive and  
14 generally include a containment, some degree of  
15 containment, particularly for the weathered material that  
16 is not mobile.

17 The use of STAR in our view increases the costs and  
18 uncertainty rather than streamlining and bringing  
19 certainty to a development schedule so the site can be  
20 confidentially redeveloped.

21 There is a series of contingencies built in the  
22 proposed plan in the event that the proposed remedy is  
23 not effective, and those are just not tenable to site  
24 redevelopment.

25 Finally, fourth, as I mentioned previously and as

1 Robert Cugini has mentioned, we believe there are other  
2 alternatives that make sense for Quendall Terminals.

3 We still believe this is an appropriate remedy. We  
4 advanced what is called Alternative 4A, and it is  
5 described in the feasibility study. It is not described  
6 in the proposed plan.

7 That alternative and others are protective, meet  
8 regulatory requirements, reduce impacts to the community  
9 and allow redevelopment to proceed in a timely manner.

10 Alternative 4A can be implemented as an example if  
11 that alternative can be implemented at cost of about 40  
12 million dollars versus the proposed plan by EPA is over a  
13 hundred million dollars.

14 That is not including the contingencies of coming  
15 back in and retreating areas that STAR did not  
16 effectively address.

17 The high cost of this proposed remedy is just not  
18 economically feasible for site redevelopment, and that  
19 has been the aim at least of the ownership group for some  
20 time. Alternative 4A and other alternatives have a much  
21 shorter implementation schedule, three years versus up to  
22 nine.

23 Lastly, that shorter active construction duration,  
24 as I mentioned earlier, reduces the impact of odor,  
25 traffic and noise to the community from six years down to

1 two years. Again, it significantly reduces impact on the  
2 neighborhood.

3 As I mentioned, we will follow up with written  
4 comments and I thank you for your time.

5 KAY MORRISON: Thank you so much. I have no  
6 other names, but if anyone else wants to provide  
7 comments, you are welcome.

8 Seeing that no one else wishes to give comments, I  
9 officially close this hearing for the proposed plan for  
10 Quendall Terminals Superfund site at 7:15 p.m. Thank you  
11 all so much for your time and thoughtful contributions.

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13 (The hearing was adjourned at 7:15 p.m.)  
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